

AMIDST SCIENCE AND LITERATURE: A CRITICAL QUEST

PRASIDA P

Researcher, Kerala University Library, Trivandrum, Kerala, India

ABSTRACT

The student of literature finds himself in the stuffy and difficult world of theory, its ramifications and its visions and revisions. The usual tendency is to choose one theory and to analyze the distempered areas of experience in a work of literature, to discover its meaning and significance. This article attempts to analyze this beaten track to take a new road leading to a new destination. An attempt is made to probe the exact nature of the interaction between science and literature. It enters the burning ground of science which is traditionally supposed to be the antithesis of literature.

KEYWORDS: Science, Literature, Clash of Two Cultures, Fusion of Two Cultures

INTRODUCTION

The prompting to adventure into the new world came from a careful reading of C.P. Snow's 1959 Rede lecture *The Two Cultures and the Scientific Revolution* which launched forth a debate that traversed across the academic and intellectual communities of the civilized world culminating in F.R. Leavis's Richmond Lecture at Cambridge attacking Snow's thesis, and worse, Snow as a novelist, who has crossed the frontiers of science and literature in real life.

The Rede lecture was a sensational event, the clash between the two titans. Leavis maintained that literature affords us examples of writers like Ruskin, Arnold, Conrad and Lawrence who showed what it is to lead an ideal life, a life not accessible to the one prompted by science and technology. Leavis was aware of the likely danger that the spread of scientific education might cause to the hegemony of literature in the academic world as he conceived it. It would certainly prove ruin to all that he had so carefully built in his career as a critic and teacher. It was his way of showing resistance to the invading forces of science. Thus C.P. Snow's 1959 Rede Lecture became the focus of academic and cultural debate with ramifications in all areas of intellectual life across the civilized world.

Snow was qualified to talk of the subject "By training I was a scientist: by vocation I was a writer" (Snow 1). The intellectual life of the western world is increasingly split into two polar groups. The literary intellectuals are at one pole- at the other the scientists. Ask a company of scientists what the second law of thermodynamics is? The response will be cold. Ask a scientist if he has read Dickens. And the answer may be "Dickens? Who the Dickens is he?" This is the gulf of incomprehension between the two groups. This reveals the cultural division between traditional culture and culture based on science. The exponents of literature give a pitying chuckle at the news of scientists who have never read a major work of English literature. They dismiss them as ignorant specialists. The high-priests of traditional culture express with gusto their incredulity at the illiteracy of scientists. This is more than polarization. It is practical and intellectual and creative loss. The scientist and the literary man have developed hostility to each other. Each secretly believes that the other is 'silly' 'arrogant'

But this clash of two cultures is of modern growth, say, since the advent of Romanticism towards the beginning of the 19th century. History of civilization tells a different story. In the 6th century B.C Pythagoras had a mind that served as a meeting point, when he conceived the shape of the universe in symbols of geometry, invented the numbers and spoke about the music of the stars. Centuries later Shakespeare was inspired by him when he wrote in *The Merchant of Venice*.

Look how the floor of heaven
 Is thick inlaid with patines of bright gold:
 There's not the smallest orb which thou behold'st
 But in his motion like an angel sings,
 Still chaireing to the young-eyed cherubins; (5.1.56-60)

Mathematics and music were the foundations of later Greek Philosophy of Plato. The opposite view was that, the universe was made of atoms and the void (Democritus). It was 'objective' and hence scientific and this inspired Epicurus through whom the scientific thought reached Lucretius in the first century BC in his *De Rerum Natura*. There was no clash of culture, the objective and the subjective in collusion.

The absence of the dichotomy between science and literature was evident during the Renaissance, except that religion gained the upper hand, turning literature into a handmaiden. The clash was between religion and philosophy. The new philosophy of science called all in question. Science was 'magic', though this was derived from Magus, the wise man Marlowe opened with Dr. Faustus, the image of the scientist in the glare of Puritanism sacrificed on the altar of religion. Shakespeare concluded the age with Prospero. Both Marlow and Shakespeare must have been shaping the figure of a scientist. Bacon was a scientific thinker and pleaded for 'Advancement of Learning', through the '*Novum Organum*' the inductive logic, the very logic of science. In 1662 the Royal society was founded as a monument of Bacon's greatness and it prepared the ground for the arrival of Newton. It took another half a century to shape up the role of the scientist in terms of the will of God. The scientist was a discoverer of the laws of nature. Pope's tribute was the famous couplet "Nature and nature's laws lay hid in night. God said let Newton be' and all was light" (242). This was the 18th century attitude, which the Romantic Movement reversed.

Blake spoke of the 'Satanic mills'-a reaction against the rising industrialism. The mechanical concept of the universe was unacceptable to the romantics. Kant said "Two things fill the mind with ever new and increasing wonder and awe—the starry heavens above me and the moral law within me" (170). This inwardness was antagonistic to the objective observation of the real world. Shelley defended poetry against calculators and economist: "Poets are the unacknowledged legislators of the world" (701). Wordsworth said 'The poet is a man speaking to men' (*Preface* 204). He did not use the word 'scientist' because the word had not yet been coined. Wordsworth went on to say the science and poetry were forms of knowledge. Scientific knowledge was esoteric, private while poetic knowledge was universal; poetry springs from the heart of the poet and like sparks kindle a million hearts. Scientific knowledge is intellectual, poetic knowledge emotional. Wordsworth went on to prophesy that a time would come when the poets sensibility would enter the world of scientific discoveries and come out and communicate new found knowledge to the world. Yet not a word about the emotion involved in science.

The word 'scientist', as we understand it, was coined only in 1840. The British Association for the advancement of science had been founded in 1831 in Glasgow to provide an annual forum where scientists could meet and discuss their work openly in a way that could be generally understood. It was in one such discussion that the word 'Scientist' was coined in 1840. The scientists realized that they should communicate to the public the significance of their work. The popular interest was fed by books and lectures on science by scientists. The new enthusiasm for scientific knowledge was proved by the fact that when Darwin's *Origin of Species* appeared on 24 November 1859, the entire printing was sold out on the first day of publication. Could we modify Wordsworth and say 'The scientist is a man speaking to men?'

This was not yet to be. The literary men had not treated scientists as ‘men’. The scientist was writ large on the canvas of life. Faustus turned out to be a man of mythological dimension. Icarus flaming down to the sea or a man of monstrous proportion—a glutton, an overreacher. Even Prospero was less than human—at least when the magician’s mantle was on. In Book III of *Gulliver’s Travels* the floating Island is entirely populated by mathematicians. Various symbolic devices are used to suggest the unsocial behavior, unimaginativeness, and pedantry of various scientists and scholars, men who would cook sunlight out of cucumber and in the brilliant final section— the fundamental error of human beings who want to live forever. Mary Shelley’s *Frankenstein* monster (1819), introduced horror. So did Stevenson’s *Dr. Jekyll and Mr. Hyde* (1886) and H.G. Wells’s *Island of Dr. Moreau* (1896). To cap it all came Aldous Huxley’s *Brave New World* (1932). What do these images of scientists tell us? The scientist is not a man speaking to men as imaged of creative imagination. It is a clear explanation for the incomprehensibility between the scientific culture and literary culture. When C.P. Snow’s *New Men* about atomic scientists appeared in 1956 the final seal was set on the scientists primarily as human beings with emotions, feelings as well as intellect and intelligence. He had crossed the boundaries and become an inclusive consciousness.

Yet the literary intellectuals and scientists stare across a gap of incomprehension and hostility. They have a curious distorted image of each other in our own time. Even on the level of emotion they spill over in dislike of each other. T.S. Eliot and Rutherford are archetypal figures of the two worlds. T.S. Eliot seriously talks about the revival of poetic drama and his disciples join in subdued voice of this innovation. The scientist’s voice is louder. Rutherford trumpets: ‘This is the heroic age of science! This is the Elizabethan age!’ (qtd. in Snow 1). Only humility holds him back from telling who the Shakespeare of the new age is. The scientist is brash, boastful. T.S. Eliot concludes ‘The Hollow Men’:

This is the way the world ends

This is the way the world ends

This is the way the world ends

Not with a bang but a whimper.(95-98)

How wrong he is as a prophet! Compare that with Rutherford famous repartee, “Lucky fellow, Rutherford, always on the crest of a wave.” “Well, I made the wave, didn’t I?” That is the limit. (qtd.in. Snow 4-5).

Literary intellectuals complain that scientists are shallowly optimistic. They do not have the sense of evil. They are not conscious of death. This is to confuse between individual experience and social experiences. Man is alone, we die alone. There are scientists who have had faith in revealed religion. Charles Darwin was a classic example. His *Origin of species* and *The Descent of Man* undid God as the creator of man. Yet Darwin remained deeply religious. When Karl Marx proposed to dedicate his *Das Capital* to Darwin, he refused to give consent, presumably because Marx had called religion the opium of the people. The scientists in general, however do not see why the individual experience should obtrude into the social experience. They are amazed that the many eminent men of letters take reactionary and outmoded positions in public affairs. Yeats, Pound and Wyndham Lewis who had dominated the literary scene in the early part of the 20th century were politically silly, but politically wicked. By comparison most scientists lean towards leftism, may be because a majority of scientists in Britain and America come from poor families. They have the future in their bones.

The polarization is a political intellectual and creative loss. Some of the very best scientists have plenty of energy and interest to spare and they read what literary people talk about. But the majority has their own culture, intensive, rigorous and active. They do not read novels, history, poetry plays. As a result their imaginative understanding is less than

it could be. The literary men are not better. They pretend that the traditional culture is the sole 'culture'. They ought to be aware of the expanding horizons of knowledge in biology, sociology, psychology and anthropology; for these are products of scientific methodology in actual application. No use lamenting with T.S. Eliot: "After such knowledge what forgiveness" ("Gerontion" 33).

There is an area where scientific method and literary imagination met and mingled to demonstrate that human nature is inextricably tied up in a tangle of culture and biology. It is Freudianism. Freud was the founder of psychoanalysis. He was the first to develop through psychoanalysis the probing of man's unconscious in the study of human behavior. To do this he explored the world of dreams. This seminal work has had a profound influence both in clinical and meta-psychology. Psychoanalysis is a technique which belongs to psychology and psychiatry, but as Freud showed, its discoveries about man's way of dreaming and using symbols have literary applications as well. Freudian technique is positivistic in that it can be used as therapy. "Where the id is, there the ego must be", said Freud. (qtd. in Trilling) 280)

Freud's scientific ideas influenced 20th century literature, and even some of the popular misunderstandings of his ideas led to further explorations on the level of creative imagination. There are three distinct aspects to Freud's impact on literature. First, literary surrealisms has been based on the idea of breaking man's psychological defenses and giving uncensored expression to irrational symbolic modes of the unconscious. Second, biographers and critics have tended to 'psychoanalyze' writers to explain literary productions through their 'conditioning', a reductive procedure. Thirdly writers, especially novelists and dramatists, have tended to present their characters in psychoanalytic terms. As a consequence of this large influence of Freud and his followers, especially in the areas of symbolic statements, some elementary knowledge of psychology has become a part of the necessary equipment of the modern reader and literary criticism.

CONCLUSIONS

In the light of the above facts we know that the war has slowly died down, but has not died out. There is a new consciousness that the issue now revived has attained a new dimension, what with cloning and the invention of living cell in the laboratory. Literature that deals with life must come to terms with science, if not to confront science with new fangled arguments. This article is just a humble effort to do that. The conclusion is simple. Science and literature are forms of knowledge: The immediate effect is aesthetic pleasure and the ultimate effect the discovery of truth, which is not esoteric to a precious possession of our race but to be shared by all alike. If it is not a fusion, it is a war of embrace between science and literature.

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